

PERSONALIZED REPORT FOR: **TIMEX SINCLAIR**

January, 1984

Jack Hodgson, Technical Editor

**\* TS 1500 INNOVATIONS**

Now that users have had a chance to make close inspections of the new TS1500 production models, a few changes made by Timex to the ROM operating system have come to light.

Dave Wood of SiriusWare in Lexington, Mass. has tracked down some changes. Two involve the fixing of bugs in the TS1000 operating system. Another modification involves the initialization routines. The 1500 has been redesigned to use the TS solid state cartridges. The new initialization routine checks to see whether a cartridge is in place and if so, it runs its program.

However, one change made by Timex may cause some problems. As a result of updating the initialization section, another routine had to be adjusted. In making the adjustment, however, the programmers seem to have made a mistake. This is apparent when a LOAD is stopped in progress, either because the operator hits "break" or because the LOAD fails, and the computer is supposed to jump back to the NEW routine. In the TS1500, unfortunately, the computer jumps to the wrong place. As a result, the computer "crashes" and must be turned off, then back on, to regain control.

This is no great problem for the average user who simply loads a single program. But it can be very frustrating for the more advanced user, who loads data and then loads another program to manipulate the data.

There is no foolproof solution to this problem. The "bug" cannot be fixed by the user because it's in a ROM chip. To minimize the problem, be more cautious when doing multiple loads. Always be certain that you have back-up copies of all data.

**\* HUNTER MEMORY BOARD**

Even though the TS 1000 can potentially address up to 64K bytes of memory, the computer is wired to use less than half of this capacity. Therefore, an awareness of the TS 1000's memory location is useful when you decide to use peripherals.

The TS memory is divided into four sections, but only one, the 16K to 32K section, is dedicated to storage of programs and data in Random Access Memory (RAM). Another section, from 0K to 8K, is the location of system ROM. The Read Only Memory stores the permanent software, the operating system, and the BASIC language which comes with the TS 1000. The other two sections, 8K to 16K and 32K to 64K, are wired in a way that limits their use. They cannot, for instance, store program instructions.

The Hunter Memory Board, which carries 8K bytes of additional RAM, is a particularly useful addition to the TS 1000. It may be positioned anywhere in the 64K, but it is most commonly located in the 8K to 16K region. This type of memory expansion can be used by many utilities to save data, and BASIC and machine language programs. The Board has an independent battery power supply so that it retains its stored contents when the computer is turned off. Hunter Non-Volatile Memory Board. \$32.95 kit with 2K RAM (some soldering required); additional 6K, \$18; \$65.95 for 8K assembled. 1630 Forest Hills Drive, Okemos, MI 48864.

## \* SOFTWARE - MEMORY SCOPE

Memory Scope, developed by a New York State user group, is a utility program that displays the contents of your computer's memory on your screen. You can read, write, edit individual bytes, or scroll up, down or sideways, to check any memory area. You can also POKE any RAM location with a new value. Bytes in memory are presented as hex or decimal numbers, or as the Sinclair characters they represent.

A particular valuable aspect of Memory Scope is that its memory contents are constantly updated as they are displayed. But what makes it a natural for any utilities library is its price--\$7.95 per cassette. Bonnie and Clyde Software, c/o Ron Barnard, 36 Tanglewood Rd., Albany, NY 12205.

## \* BUBBLE SORT

Here's a BASIC routine that can be run on any TS computer and can be entered into your program to sort any group of numbers. Bubble sorting compares each number on the list with each successive number and places them in order of importance. The program can be modified to sort strings in the same way.

```
1 REM INPUTING THE LIST          70 IF A(S)>A(J) OR A(S)=A(J)
2 DIM A(8)                      THEN GOTO 90
10 FOR J=1 TO 8                  74 REM IF YES SWAP THEM
15 INPUT B                       75 LET M=A(S)
16 LET A(J)=B                    80 LET A(S)=A(J)
17 PRINT A(J)                   85 LET A(J)=M
20 NEXT J                       89 IF NO THEN NEXT NO.
49 REM SORTING ROUTINE          90 NEXT I
50 FOR J=1 TO 8                  95 NEXT J
52 FAST                          96 REM PRINT SORTED LIST
55 LET K=J+1                     97 PRINT
60 FOR I=K TO 8                  98 FOR J=1 TO 8
65 LET S=K+8-I                   99 PRINT A(J)
69 REM ARE NO'S ARE OUT        100 NEXT J
    OF ORDER?
```

## \* BOOKS

- o THE TIMEX SINCLAIR 2068, by Roger Valentine. 118 pages. Wiley and Sons. \$12.95.

This is the first of the TS 2000 series books to hit the market. A general interest book, it is a cross section of useful facts, programs, and explanations about the uses and operations of this new Timex machine.

Its chapters include Games, Utilities, Serious Applications, Graphics, Music (using Beep only). The book seems to be based on the British Spectrum computer which is virtually identical in operation to the 2068. However, as a result, it does not contain applications of the Timex instituted Sound or Stick commands.